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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,494

04/27/2006

Akiko Fujino

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10/01/2009

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EXAMINER

LEE, CYNTHIA K

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,494	<b>Applicant(s)</b> FUJINO ET AL.	
	<b>Examiner</b> CYNTHIA LEE	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Election/Restrictions***

Applicant's election of Species I in the reply filed on 7/8/2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Priority***

Acknowledgement has been made of applicant's claim for priority under 35 USC 119 (a-d). The certified copy has been filed on 4/27/2006.

***Information Disclosure Statement***

The Information Disclosure Statement (IDS) filed 4/16/2007, 4/29/2008 has been placed in the application file and the information referred to therein has been considered.

***Drawings***

The drawings received 4/27/2006 are acceptable for examination purposes.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ueshima (US 6335114).

Refer to fig. 6 and 7. Ueshima discloses a lithium ion secondary battery, comprising: a positive electrode comprising a positive electrode core material including a positive electrode current collecting portion and a material mixture carrying portion, and a positive electrode material mixture layer carried on said material mixture carrying portion;

a negative electrode comprising a negative electrode core material including a negative electrode current collecting portion and a material mixture carrying portion, and a negative electrode material mixture layer carried on said material mixture carrying portion;

a separator 53 interposed between said positive electrode and said negative electrode;

a porous electron-insulating layer 56 interposed between said positive electrode and said negative electrode, and a non-aqueous electrolyte;

wherein said positive electrode material mixture layer includes a lithium-containing composite oxide;

said negative electrode material mixture layer includes a material capable of absorbing and desorbing lithium; (4:25-40)

said porous electron-insulating layer is carried on a region including a surface of said positive electrode current collecting portion and a surface of said positive electrode

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material mixture layer, and/or carried on a region including a surface of said negative electrode current collecting portion and a surface of said negative electrode material mixture layer. See fig. 7. The insulating layer 217 covers the bare surface of the current collector 217 (Applicant's current collector portion) and the active material 222 (Applicant's mixture layer).

said positive electrode and said negative electrode are wound with said separator and said porous electron- insulating layer interposed therebetween (fig. 6).

Regarding claim 1, Ueshima discloses said porous electron-insulating layer includes a glass (26:3) and a polymer (25:45-55). Regarding Applicant's "inorganic oxide", one would envisage that glass is made up of inorganic oxide, i.e. silica, alumina, calcium oxide, magnesium oxide, sodium carbonate. Should it not be anticipatory, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use glass made of an inorganic oxide since it is the most common form of glass.

Regarding claim 2, a portion of a strip positive electrode lead and a portion of a strip negative electrode lead 54 are welded to said positive electrode current collecting portion and said negative electrode current collecting portion, respectively (22:30-50).

Regarding claim 3, said positive electrode current collecting portion and/or said negative electrode current collecting portion has an exposed region 52d not carrying said porous electron-insulating layer, and said portion of lead is welded to said exposed region (22:30-50).

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Regarding claim 5, a said binder included in said porous electron-insulating layer comprises a resin material which has a glass transition point or a melting point of 150°C (8:15-30). In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In *re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In *re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05. Further, Ueshima teaches that the battery can effectively exhibit a shutdown function with temperature increase when the polymers have excellent elasticity at high temperatures (7:57-60). Ueshima clearly teaches that the melting point of the polymer is a result effective variable. It has been held by the courts that discovering an optimum value or workable ranges of a result-effective variable involves only routine skill in the art, and thus not novel. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). See MPEP 2144.05.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Lee whose telephone number is 571-272-8699. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cynthia Lee/  
Examiner, Art Unit 1795

/PATRICK RYAN/  
Supervisory Patent Examiner, Art  
Unit 1795